AMENDMENTS TO THE CLAIMS

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

1. (Currently amended) A method of image registration comprising the steps of:

[[-]] providing at least first image data and second image data[[,]];

[[-]] selecting of sub-volumes of the first and the second image data[[,]];

[[-]] performing with a processor a registration for each one of the sub-volumes, each registration providing a transformation parameter set[[,]];

[[-]] performing with the processor a global registration for the first and second image data, the global registration providing a global transformation parameter set[[,]];

[[-]] comparing with the processor one of the transformation parameter sets to other transformation parameter sets and/or to the global transformation parameter set for identification of an outlier transformation parameter set of the transformation parameter sets[[,]];

performing a registration of the outlier transformation parameter set; and

[[-]] outputting of a signal being indicative of the sub-volume of the outlier transformation parameter set.

2. (Original) The method of claim 1, whereby the first image data and/or the second image data is provided by X-ray imaging, magnetic resonance imaging, computer tomography imaging, functional MRI, single photon emission computer tomography or positron emission tomography.

3. (Previously presented) The method of claim 1, whereby the selection of the sub-volumes is performed manually by means of a graphical user interface.

4. (Previously presented) The method of claim 1, whereby the selection of the sub-volumes is performed by means of an image segmentation step.

5. (Previously presented) The method of claim 1, further comprising calculating a mean distance measure of the one of the transformation parameter sets to the other transformation parameter sets and to the global transformation parameter set, whereby the comparison of the one of the transformation parameter sets with the other transformation parameter sets and the global transformation parameter set is performed on the basis of the mean distance measure for determining whether the one of the transformation parameter sets is an outlier transformation parameter set.

6. (Original) The method of claim 5, whereby the one of the transformation parameter sets is identified as an outlier transformation parameter set, if the mean distance measure of the one of the transformation parameter sets is greater than a threshold distance value.

7. (Previously presented) The method of claim 1, further comprising cutting off of the sub-volume of the outlier transformation parameter set.

8. (Previously presented) The method of claim 1, further comprising performing an elastic image registration in response to the signal.

9. (Currently amended) A computer ~~Computer~~ program product, in particular digital storage medium, comprising program means for registration of at least first image data and second data, the program means being adapted to perform the steps of:

[[-]] storing of a selection of sub-volumes of the first and second image data[[,]];

[[-]] performing a registration for each one of the sub-volumes, each registration providing a transformation parameter set[[,]];

[[-]] performing a global registration for the first and second image data, the global registration providing a global transformation parameter set[[,]];

[[-]] comparing one of the transformation parameter sets to other transformation parameter sets and/or to the global transformation parameter set for identification of an outlier transformation parameter set of the transformation parameter sets[[,]];

performing a registration of the outlier transformation parameter set; and

[[-]] outputting of a signal being indicative of the sub-volume of the outlier transformation parameter set.

10. (Currently amended) A medical image data processing apparatus comprising:

[[-]] a memory for a storage of at least first and second image data[[,]];

[[-]] means for selecting of sub-volumes of the first and second image data[[,]];

[[-]] means for performing a registration for each one of the sub-volumes and for a global registration of the first and second image data, each registration providing a transformation parameter set[[,]];

[[-]] means for identification of an outlier transformation parameter set of the transformation parameter sets on the basis of the transformation parameter sets[[,]];

means for performing an image registration when the outlier transformation parameter set has been identified; and

[[-]] means for outputting of a signal being indicative of the sub-volume of an identified outlier transformation parameter set.

11. (Original) The medical image data processing apparatus of claim 10, further comprising a graphical user interface for selection of the sub-volumes.

12. (Previously presented) The medical image data processing apparatus of claim 10, further comprising means for image segmentation for the selection of the sub-volumes.

13. (Currently amended) The medical image data processing apparatus of claim[[s]] 10, ~~further comprising means for elastic image registration for performing of an elastic image registration when an outlier transformation parameter set has been identified~~ wherein the image registration is an elastic image registration.

14. (New) The medical image data processing apparatus of claim 10, wherein the first image data and/or the second image data is provided by X-ray imaging, magnetic resonance imaging,

computer tomography imaging, functional MRI, single photon emission computer tomography or positron emission tomography.

15. (New) The medical image data processing apparatus of claim 10, further comprising means for calculating a mean distance measure of the one of the transformation parameter sets to the other transformation parameter sets and to the global transformation parameter set, wherein the comparison of the one of the transformation parameter sets with the other transformation parameter sets and the global transformation parameter set is performed on the basis of the mean distance measure for determining whether the one of the transformation parameter sets is an outlier transformation parameter set.

16. (New) The medical image data processing apparatus of claim 15, wherein one of the transformation parameter sets is identified as an outlier transformation parameter set if the mean distance measure of the one of the transformation parameter sets is greater than a threshold distance value.

17. (New) The medical image data processing apparatus of claim 10, means for cutting off of the sub-volume of the outlier transformation parameter set.

18. (New) The medical image data processing apparatus of claim 10, further comprising means for performing an elastic image registration in response to the signal.

19. (New) The method of claim 1, wherein the registration of the outlier transformation parameter set is an elastic registration.

20. (New) The computer program product of claim 9, wherein the registration of the outlier transformation parameter set is an elastic registration.